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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,179

09/15/2003

Gheorghe C. Cascaval

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EXAMINER

PAN, DANIEL H

ART UNIT

PAPER NUMBER

2183

NOTIFICATION DATE

DELIVERY MODE

07/21/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/662,179	<b>Applicant(s)</b> CASCAVAL ET AL.	
	<b>Examiner</b> Daniel Pan	<b>Art Unit</b> 2183	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/15/04</u> .   | 6) <input type="checkbox"/> Other: _____                          |

Claims 16-29 are presented for examination. Claims 1-15 have been canceled.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 26 is reciting computer readable medium (see claim 26, line 1). However, no clear definition of computer readable medium has been found in the specification. In fact , the specification never recites "medium."

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Agarwal et al. (5,832,533)

As to claim 16, 22, 24, 26,28, Agarwal taught at least :

a) an instruction of fixed length (see instruction format in fig.4 [300]) comprising a first field [operand field] for specifying a plurality of other fields [316][318] , the first field being used to address registers into a register file (general purpose registers, see group of general purpose registers in col.4, lines 25-27), the register file comprising a size larger than the first field can address (see CPU address a larger register file in

col.2, lines 1-17 for background, see the capability of addressing larger number of general purpose registers than the value represented by the operand field in col.2, lines 29-44 for summary of invention);

b) an indirection table comprising a plurality of entries (see fig.5 [330]), which are indexed by the first field [operand field] in the instruction, each entry storing a plurality of register identifiers (see the generated base address for addressing general purpose registers in indexed mode in col.7, lines 62-67, col.8, lines 1-4); and  
a decoder for decoding the instruction that uses the indirection table to address a register file (not explicitly shown, but must have in order to analyze the bit information in operand fields for execution purpose, see instruction format in fig.4, col.6, lines 51-62, see how execution unit dispatch instruction for execution in col.3, lines 20-27).

As to claims 17,23, 27, Agarwal taught :

a) allocating an indirection table entry (see base address generated by base address table in fig.4);  
b) storing the register values in said indirection table entry (see value stored in base address registers in col.7, lines 61-65) ; and  
c) generating a new instruction that uses indirection table entry (see instruction word in fig.4, col.6, lines 51-62).

As to claim 18, Agarwal also taught tree-address instruction (see col.7, lines 10-15). As to the virtual register file, see the higher level of memory hierarchy in col.3, lines 29-37).

As to claims 19, 25,29, Agarwal also taught three address instruction (see three operand instruction in col.7, lines 5-15).

a) extracting from the instruction the field [operand field] identifying the register fields (see base and disp fields) ; using said field to index into the indirection table (see each operand fields in fig.4, see base address table for the indirection table) ; and expanding the instruction using the entry from the indirection table address the register file using the expanded instruction (see base + disp field).

As to claim 21, Agarwal also taught direct access by instruction (see direct addressing mode in col.7, lines 41-45).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Kusakabe (5,165,026) is cited for the teaching of indexed address of register file (see fig.8 fig.9 , col.7, lines 59-68, col.8, lines 1-29);

b) Wollum et al. (4,292,669) is cited for the teaching of tree address instruction (see col.16, lines 37-66).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

### *21 Century Strategic Plan*

/Daniel Pan/  
Primary Examiner, Art Unit 2183